

HANFORD INITIATIVE

NOVEMBER 1997 STATUS REPORT - WELDON SPRING SITE REMEDIAL ACTION PROJECT, ST. CHARLES, MISSOURI

The following is the Weldon Spring Site Remedial Action Project's response to the DOE's Hanford Initiative Evaluation Criteria. The responses have been arranged by sections (A, B, C and D). Please note that a response could be inclusive of several evaluation criteria items that are itemized in the DOE document.

Section A

DOE site contractors must scrutinize their use of any chemicals that have the potential for explosion, fire, or significant toxic release, and must promptly dispose of unneeded chemicals in accordance with safety requirements and environmental regulations. DOE field offices should develop an approval process to assure the disposal or safe and environmentally compliant storage and handling of such materials that are retained.

Collective response for all criteria in this section

The Weldon Spring Site Remedial Action Project (WSSRAP) has an established process to procure chemicals to be used onsite. The requirements are binding on both the Contractor and Subcontractors alike. The main element is adherence to the written Hazard Communication (HAZCOM) Program, of which the following are inherent: The WSSRAP Carcinogen Control Policy, the Site Waste Minimization Program, and the MSDS Review Process. WSSRAP's administrative controls that are discussed below illustrate our support to the DOE's commitment to the safe management of chemicals at their sites.

1. Management Commitment and Leadership: WSSRAP's Project Management is firmly committed to setting the highest priorities on environmental, and health and safety issues. These include public safety and health, worker protection, and environmental preservation and restoration. All project activities are executed in a manner that reflects the project's full commitment to these priorities. Management's commitment to health and safety is exemplified by the following documents:

- WSSRAP Health and Safety Policy
- Project Director's I.O.C to All Site Personnel - DOE's Occupational Safety and Health Policy

These policies are continually reinforced during departmental staff meetings, weekly Tuesday/Thursday safety meetings, annual refresher training programs, and inter-office correspondences. WSSRAP's application to obtain the Star Status under the DOE's Voluntary Protection Program is currently under review.

2. HAZCOM Program: Should a new chemical or a product be necessary for the project, the party in need of the item is required to provide a concise written narrative about the item. This narrative is actually a formal (i.e., contractually required) submittal which requires appropriate review and favorable disposition by the two principal onsite departments responsible for such matters: Environmental Safety and Health (ES&H), and the Compliance Department. The elements in each submittal are thoroughly reviewed for compliance with the following minimum criteria: product name; total quantities that will be stored onsite (reviewed for EPCRA reporting); intended use and method of usage/application of the chemical/s; hazardous chemical content (chemicals that could produce listed wastes are not permitted to be brought onsite); carcinogen content (the use of carcinogens are controlled onsite); potential health and safety issues associated with the chemical; MSDS availability; potential training requirements; possible wastes and amounts that could be generated, etc. The submittal reviews are conducted by competent and designated staff with titles of “Waste Management Coordinator” and “ES&H HAZCOM Coordinator”. Should there be reasonable doubts on the health risks associated with a particular product, the WSSRAP has a program to see if safer alternative products exist for those chemicals. All onsite chemicals/products are logged onto the WSSRAP MSDS Tracking System, a computer database. Each “Authorized” chemical container is then provided with “Authorization Labels” which have to be affixed on the containers as part of the requirements for onsite usage. Inspecting containers for the presence of these labels is a checklist item on field HAZCOM inspections.
3. Employee Involvement Programs: WSSRAP has several mechanisms to include employee participation so as to maintain high health and safety standards and compliance with applicable regulations. Chief among these are the “Time Out For Safety”, “Blue Card”, “Teaming To Improve Productivity and Safety”, “Project Director’s Round Table Sessions”, “Safety, Quality, and Enjoyment Ballots”, “All Hands Meetings”, “Responsibility Assignment Matrix” Teams, 16 different “Safety Committees”, etc. Work crew concerns are paid close attention to and several positive suggestions have resulted in constantly improving and better work practices within WSSRAP. Teamwork and the buddy system is strongly encouraged in the conduct of all operations. Employee involvement has proven to be an effective form of control to protect workers from health and safety hazards at the WSSRAP. An achievement to be mentioned here is the recent distinction of the Subcontractor in charge of operations at the Hazardous Waste Storage Building (Building 434), who received the award for 540 continuous Safe Work Days. WSSRAP is proud to bestow such an honor on that Subcontractor, since the award represents the longest time span for “Safe Work Days” by any organization onsite.
4. Formal Documentation: WSSRAP is contractually bound by the requirements of DOE Orders 5480.23, and 5481.1B, to produce and maintain Hazard Assessment/ Categorization, Safety Analyses, and Facility Safety documentation. Assessments of chemicals and hazardous wastes is an integral function during the development of these documents. Certain projects also progress to their startup via Operational Readiness Reviews, which is a system of checklists of required items that have to be satisfied and peer-reviewed prior to Project Management authorization to startup. In addition,

WSSRAP utilizes a change control process which requires review of proposed changes prior to implementation to ensure that the safety of the activity or facility is not compromised.

5. Health and Safety Plans, Safe Work Plans, Task-Specific Safety Assessments, and ES&H Review Forms: These are documents that are generated prior to the conduct of tasks at the WSSRAP. The HASP is an overall document that governs a particular work package. Written HASPs are a requirement for WSSRAP per the OSHA HAZWOPER regulation. All work packages and bid packages at the WSSRAP include a copy of the applicable HASP, under which all field operations are conducted. Safe Work Plans (SWP's) are documents developed by a subcontractor (with assistance from the Contractor), that are specific to various categories of tasks and also identifies the potential physical, exposure, and chemical hazards associated with those activities. The TaSSA is a WSSRAP-specific document that may be used in lieu of a SWP and is applicable to single individual tasks which may have potential health and safety implications. The ES&H Review Form is another WSSRAP-specific document, similar to the USDOE's Enhanced Work Planning Program. These review forms are generated by ES&H Department Field Supervisors for virtually every task which can be perceived to have health and safety hazards associated with them. Among other things, each ES&H Review Form lists and quantifies the chemical and radiological hazards, the personal protective equipment to be utilized for that individual task, and decontamination procedures that are to be followed. Each SWP and TaSSA is reviewed by a group of peers and/or supervisors, and require their signatures along with those of the work crew prior to the activity being conducted. It is considered a Safety Violation should work crews fail to review the applicable TaSSAs or SWPs prior to commencing a work activity.
6. Waste Management and Minimization: All wastes generated at WSSRAP are mostly stored in 55-gallon drums. There are no waste storage tanks onsite. Wastes in these drums or containers are comprehensively characterized following the WSSRAP Waste Analysis Plan. Each drum or waste container also has an unique tracking number according to the WSSRAP Waste Inventory Tracking System (WITS). A major achievement in our efforts at minimizing onsite hazardous wastes has been our successful disposal in 1996/7 of approximately 25,000 gallons of mixed wastes via incineration at the DOE's K-25 facility in Oak Ridge, TN.
7. Design Review Board: This Board consists of a team of professionals tasked with designing projects based on the scope of work involved, and reviewing and ensuring that the documentation associated with a particular work package is appropriate and correct until the package goes out to the bidding stage. Right from the inception of a work package, close attention is paid to health and safety, and waste management items by this Board in relation to the scope of work. Documents that may be consulted by the health and safety team member of the team to identify the overall health and safety hazards for any work package would be: a.) Historical data about the work location (if available), b.) Prior sampling data for existing and suspect contaminants at that location, c.) Drawings,

both current and previous, and d.) Pre-job walkovers or ALARA reviews of the areas, if necessary.

8. Chemical Compatibility: All wastes onsite are assessed for their chemical characteristics and contaminants as per the written WSSRAP Waste Analysis Plan. Hazardous wastes are stored at the WSSRAP in a designated building (Building 434). As mentioned earlier, the waste containers are appropriately labeled, identified by their WITS numbers, and stored and segregated according to their characteristics. Certain wastes are stored in bermed areas, as required. Any containers containing flammable wastes are stored in three individual flammable storage sheds adjacent to Building 434. Drums containing mixed wastes are fitted with pressure-relief bungs which are required to preclude the possibility of any pressure-buildup inside the drums.
9. Field Inspections and Assessments: The two primary departments involved with chemical health and safety, and waste management are the ES&H and Compliance Departments. Field inspections are conducted to implement onsite requirements, policies and procedures, and determine their effectiveness towards worker and environmental protection. Waste Management Engineers, Industrial Hygienists, and Health Physicists routinely conduct inspections of waste storage areas, checking for drum labeling, proper storage conditions, potential drum pressurization situations, waste compatibility, lab chemical hygiene issues, leaking containers, and HAZCOM Program implementation, among others. These inspections are conducted per procedure, with appropriate checklist items.
10. Chemical and Waste Inventories: These are conducted by the Compliance Department on a routine basis. Chemical inventories are conducted once a calendar quarter. Waste inventories are conducted on a monthly basis.

SECTION B

DOE field offices must reassess known vulnerabilities (chemical and radiological) at facilities that have been shutdown, are in standby, are being deactivated, or have otherwise changed their conventional mode of operation in the last several years, and report status to their Program Secretarial Officers and the Assistant Secretary for ES&H within 120 days. Facility operators must evaluate their facilities and operations for new vulnerabilities on a continuing basis.

As in Section A, the responses for this section is collective of all the criteria stated in the DOE document.

There are several administrative and engineering controls in place at the WSSRAP in order to detect and prevent vulnerabilities in our operations. A list of those systems in place are discussed below:

1. Formal Documentation: WSSRAP is contractually bound by the requirements of DOE Orders 5480.23, and 5481.1B, to produce and maintain Hazard Assessment/

Categorization, Safety Analyses, and Facility Safety documentation. Assessments of chemicals and hazardous wastes is an integral function during the development of these documents. Certain projects also progress to their startup via Operational Readiness Reviews, which is a system of checklists of required items that have to be satisfied and peer-reviewed prior to Project Management authorization to startup. In addition, WSSRAP utilizes a change control process which requires review of proposed changes prior to implementation to ensure that the safety of the activity or facility is not compromised. Other programmatic systems in place at the WSSRAP include the Readiness Assessment, and Safety Significant Review Documentation.

2. Employee Involvement Programs: WSSRAP has several mechanisms to include employee participation so as to maintain high health and safety standards. Chief among these are the “Time Out For Safety”, “Blue Card”, “Teaming To Improve Productivity and Safety”, “Project Director’s Round Table Sessions”, “Safety, Quality, and Enjoyment Ballots”, “All Hands Meetings”, “Responsibility Assignment Matrix” Teams, 16 different “Safety Committees”, etc. Work crew concerns are paid close attention to and several positive suggestions have resulted in constantly improving and better work practices within WSSRAP. Teamwork is strongly encouraged in the conduct of all operations. Employee involvement has proven to be an effective form of control to protect workers from health and safety hazards at the WSSRAP.
3. Training Programs: WSSRAP has an onsite Training Department which offers all new employees sufficient training about the site and indoctrinates them on the health and safety aspects of conducting work for the project. All new employees receive General Employee Training (GET). Those employees who work in the controlled areas of WSSRAP also receive General Employee Radiological Training (GERT) and Safety Health and Radiation Protection (SHARP) Training. Specialized training courses offered to employees in the areas of waste management include Department of Transportation, RCRA, TSCA, and HAZWOPER.
4. Engineering Controls: There are several controls in place to prevent unforeseen emergencies when handling chemicals and wastes. Among these controls are: local exhaust systems, laboratory hoods with adequate face velocities, fire suppression systems, pressure relief devices and bungs for storage drums, bermed storage areas for hazardous wastes, designated waste storage areas, worker health and safety protection systems (including the use of PPE), etc.
5. Self-Assessments, Internal Audits, and Routine Surveillances by Peer Groups: These are some of the mechanisms in place to measure the adequacy of site controls on a continual basis. In addition, ALARA surveillances and 10 CFR 835 internal reviews are conducted by the ES&H Department routinely. Internal Audits are normally conducted by the Quality Assurance Department and target various programmatic areas of operations. WSSRAP is also subject to annual health and safety audits by outside personnel: viz., Corporate Health and Safety Officers, and DOE Evaluation Teams. These formalized programs, along with follow up assessments on any corrective actions ensure the efficacy

of the controls in place and provide the feedback necessary to maintain and/or improve necessary controls.

6. Incident Reviews and Assessments: As a follow up to onsite incidents, it is customary at WSSRAP to assemble the team of individuals responsible for that work activity, along with supervisory and Management staff as necessary to review the incident, identify causes and corrective actions, and resolve the situation such that future similar incidents can be avoided. WSSRAP's designated OPRS personnel also actively participate in such reviews.
7. Lesson's Learned Program: WSSRAP has a database of items that are compiled by onsite personnel who have learned valuable ideas and other information from particular situations. Items input into this database are usually those that could benefit future activities. A large proportion of items included into this database are health and safety-related.

SECTION C

DOE and Contractor field organizations with operational responsibilities must assess the technical competence of their staffs to recognize the full range of hazards presented by the materials in their facilities, act on results, and implement training programs where needed.

As in Sections A and B, the responses for this section is collective for all the criteria stated in the DOE document.

The programs in place at WSSRAP to ensure that personnel are trained and authorized to perform activities are discussed below:

1. Training Programs: WSSRAP has an onsite Training Department which offers all new employees sufficient training about the site and indoctrinates them on the health and safety aspects of conducting work for the project. All new employees receive General Employee Training (GET). Those employees who work in the controlled areas of WSSRAP also receive General Employee Radiological Training (GERT) and Safety Health and Radiation Protection (SHARP) Training. Specialized training courses offered to employees in the areas of waste management include DOT, RCRA, TSCA, and HAZWOPER training.
2. Training Tracking System: The WSSRAP has a site-specific tracking system for all Contractor and subcontractor employees who are authorized to perform work called the Training Matrix System (or TMAX). This system is a computerized database listing the entire training history for individuals according to their job classifications. This system also keeps track of due dates for upcoming refreshers and is capable of providing training matrix percentages in various formats (for single individuals, unit groups, or for entire departmental personnel). The system is read-only to most employees with only authorized employees given the computer database access privileges to make corrections

or changes to entries. All onsite training programs are documented and the sign in/attestation forms are sent to the Communications Department for incorporation into the individual's TMAX. Individuals who maintain their TMAX are issued "Training Cards" by the ES&H Department. These cards are color-coded into three colors (Red, Yellow and Blue), according to the general job functions of individuals. Yellow cards indicate that an individual is 24-hr HAZWOPER Trained. Red cards represent those individuals with who are 40-hr HAZWOPER and respirator-qualified, but not asbestos trained. Blue cards are the highest order of classification and indicate that the individuals are HAZWOPER trained, asbestos qualified, and can wear respiratory protection.

3. Facility-Specific Training: In addition to the above, WSSRAP offers several training programs for onsite personnel who serve specialized functions. Specialized programs include Waste Storage Area and Building 434 Operations, Hearing Conservation, Respiratory Protection, Confined Spaces, Lockout/Tagout, Excavation, Rigging, Water Treatment Plant and CSS Operations, Dredge Operations, Man Made Mineral Fibers, Emergency Response and First Responder, Fire Safety, Specific Chemical Hazards, Bloodborne Pathogens, First Aid and CPR, Conduct of Operations, and TQM, to name a few. Training is conducted by authorized personnel and documented on sign in sheets, which are then sent to the Communications Department for incorporation into individual training matrices. In addition to the above formal training programs, informal (awareness-type) training sessions are provided on a frequent basis to specialized work crews.
4. Health and Safety Plans, Safe Work Plans, Task-Specific Safety Assessments, and ES&H Review Forms: Another way of ensuring that the Facility Workers can recognize the significance of hazards at their respective work environments is the existence of programs such as those listed in this item. These are documents that are generated prior to the conduct of tasks at the WSSRAP. The HASP is an overall document that governs a particular work package. Written HASPs are a requirement for WSSRAP per the OSHA HAZWOPER regulation. All work packages and bid packages at the WSSRAP include a copy of the applicable HASP, under which all field operations are conducted. Safe Work Plans (SWP's) are documents developed by a subcontractor (with assistance from the Contractor), that are specific to various categories of tasks and also identifies the potential physical, and exposure hazards associated with those activities. The TaSSA is a WSSRAP-specific document that may be used in lieu of a SWP and is applicable to single individual tasks which may have potential health and safety implications. ES&H Review Forms are also WSSRAP-specific, and this program is similar to the USDOE's Enhanced Work Planning forms. These forms are generated by ES&H Department Field Supervisors for virtually every task which can be perceived to have health and safety hazards associated with them. Among other things, each ES&H Review Form lists and quantifies the chemical and radiological hazards, the personal protective equipment to be utilized for that individual task, and decontamination procedures that are to be followed. Each SWP and TaSSA is reviewed by a group of peers and/or supervisors, and require their signatures along with those of the work crew prior to the activity being conducted.

It is considered a Safety Violation should work crews fail to review the applicable TaSSAs or SWPs prior to commencing a work activity.

WSSRAP is a dynamic project where opportunities for continuous improvement are ever-present. The following mechanisms exist at this time to provide feedback information from a health and safety, and waste management perspective:

1. Formal Reports on Field Activities and Surveillances: Supervisors are required to oversee, document field occurrences and correct/resolve any non-conforming issues.
2. Routine Self-Assessment and Internal Audits: The various departments routinely conduct formal inspections and assessments of health and safety programs intended to protect the health and safety of workers, and that of the environment. The object of these evaluations is to ensure that an atmosphere of continuous evaluation and improvement is maintained. Any deficiencies noted as a result of the assessments are corrected, and procedural or programmatic changes are made as necessary. Inter-departmental assessments are conducted by the Quality Assurance Department.
3. External Assessments: These are conducted by corporate Health and Safety Officers on an annual basis, and routinely by a DOE Team from Oak Ridge, Tennessee. Health and Safety items are assessed for the project as an entirety, and any recommendations for improvement and enhancement are acted upon promptly.
4. Accident/Incident Reviews: These reviews are called for by the Project Manager or the appropriate Functional Area Manager that might have been affected. The review team consists of all parties affected by the incident. The object of these reviews is to provide feedback on the incidents and implement corrective actions necessary to prevent recurrences.
5. Lessons Learned Program: WSSRAP has a database of items that are compiled by onsite personnel who have learned valuable ideas and other information from particular situations. Items input into this database are usually those that could benefit future activities. A large proportion of items included into this database are health and safety-related.
6. Employee Participation Programs: WSSRAP has several mechanisms to include employee participation so as to maintain high health and safety standards, and provide feedback from the workforce. Chief among these are the “Time Out For Safety”, “Blue Card”, “Tuesday/Thursday Safety Training Programs”, “Teaming To Improve Productivity and Safety”, “Project Director’s Round Table Sessions”, “Safety, Quality, and Enjoyment Ballots”, “All Hands Meetings”, “Responsibility Assignment Matrix” Teams, various “Safety Committees”, etc. Work crew concerns are paid close attention to and several positive suggestions have resulted in constantly improving and better work practices within WSSRAP. Teamwork is strongly encouraged in the conduct of all operations.

SECTION D

DOE field offices must assess their Lessons Learned and Occurrence Reporting programs to assure that 1). Outgoing information is well characterized and properly summarized, and 2). Incoming information is thoroughly evaluated, properly disseminated, and appropriately implemented, and tracked through formal management systems.

The WSSRAP has a formal Lessons Learned Program, under the direction of a competent and designated Lessons Learned Coordinator in the Project Quality Department. This computerized database is referred to by onsite personnel when planning and executing various work activities. Each new Lessons Learned item is subject to review, applicability, and classification by a team of competent professionals, including the onsite Legal counsel. The DOE's Lessons Learned database is also available for consultation in work planning activities. A dedicated onsite Departmental Procedure: SQP-25 "Lessons Learned", exists, which is an essential element of the TMAX training database for designated onsite personnel involved in field activities.

WSSRAP is contractually bound to adhere to DOE Order 232.1a. Two written site-specific documents - "Manual for Categorization of Reportable Occurrences (July 1997)", and a Departmental Procedure RC-5 "Occurrence Reporting" - have been developed in this context. These documents complement the requirements of the DOE Order and provide site-specific examples and outlines WSSRAP's internal tracking mechanisms.

1. Lessons Learned Program: WSSRAP has a database of items that are compiled by onsite personnel who have learned valuable ideas and other information from particular situations. Items input into this database are usually those that could benefit future activities. A large proportion of items included into this database are health and safety-related, and are frequently consulted by individuals when planning onsite activities. Hard copies of individual applicable items in the Lessons Learned Program are disseminated to necessary personnel by their Supervisors whenever applicable.
2. DOE Alerts: The WSSRAP ES&H Department assesses all DOE-issued Alert documents (Lessons Learned, Health Alerts, etc.), and reviews each for applicability and potential incorporation into the work practices onsite. Training/updates are conducted as necessary to affected personnel, and the TMAX system is used to document these training sessions. Copies of all DOE Alert bulletins are disseminated to personnel in the various onsite departments by their respective Managers with an objective to enhance knowledge on continual basis.
3. Accident/Incident Reviews: Such reviews are called for promptly by the Project Manager or the appropriate Functional Area Manager that might have been affected by an incident. The review team consists of all parties affected by the incident. The object of these reviews is to provide feedback on the incidents and implement corrective actions necessary to prevent recurrences. ORPS and Lessons Learned personnel are active participants in such reviews.

4. ORPS Program: As mentioned above, WSSRAP is firmly committed to DOE Order 232.1a. There are designated staff appointed for this purpose, along with backup personnel as necessary. These personnel are actively involved in the critiques of onsite occurrences/reviews. All participants of such reviews are provided with written reports in a timely manner for review and comment as necessary. Root-cause reviews are also an essential programmatic element and is used to identify the progressive stages of incidents and also identify and implement any corrective actions that may arise. The ORPS personnel are additionally involved with tracking their incident review documents and providing statuses of overdue/update reports. The Contractor is pleased to announce that there are no currently overdue reports at this time.

November 14, 1997